Identification of latent psoroptic mange in sheep in Al-Diwanyia province

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Abstract

The present study was conducted to determine the infestation rate of latent psoroptic mange in clinically healthy sheep .Hundred and seventy five samples were collected from healthy sheep in different areas of Al-diwanyia province at summer season from cryptic sites which include external auditory canal ,infraorbital fossae ,inguinal fossae and perineum. Results revealed that infestation rate was 20.57 %;the highest infestation rate 28.8 % was reported in sheep aged less than 1 year compared with 19.2% &16.4% in sheep aged 1-2 years and above 2years,respectively .From other hand , the infestation rate was varied according to cryptic sites as the result showed 66.6% ,22.2% and 11.1% in external auditory canal , infraorbital fossae and inguinal fossae , respectively ;while no infestation was reported in perineum .The *Psoroptes ovis* was the only mites identified in laboratory.

Introduction

Psoroptic mange (sheep scab) is found in most of sheep –rearing countries of the world ,the disease is also of considerable economic significance because of poor animal growth fatalities and down grading of wool and leather (Martin and Aitken,2002).But it is also responsible for body mange in cattle and horses (Radostits ,*et al* ,1997).The *Psoroptes ovis,* responsible for true sheep-scab ,has oval body shape which may be reach up to 0.8mm in length (Margaret *et al* ,1994) .These mites do not burrow but live on surface of skin under the scab and scales that induce and can be viable off host for 15- 17 days (O'Brien *et al*,1994) .The psoroptic mange is more active in autumn and winter months which cause a typical outbreaks .The affected animals show itchiness ,emaciation and shedding fleece (Radostits ,*et al* ,1997) .In summer the mites survive in protected parts of body such as perineum ,infraorbital fosse ,inguinal fosse and in side of the ear, which initiate the outbreaks when the cold weather arrives, therefore the examination of these parts is very important to confirm the diagnosis of latent phase of disease in healthy flocks at summer season (Bates,1996 b, Urquhart *et al*,2003) .This study was designed to diagnoses the latent phase of the psoroptic mange in sheep in Al-diwanyia province at summer months by microscopic examination of swab samples obtained from protected area such as external auditory canal , infraorbital fossae ,Inguinal fossae and perineum .

Materials and Methods

Hundred and seventy five of cryptic sites samples were collected at the summer season (from mid July up to mid August,2004), from clinically healthy sheep with different ages from different regions of Al-diwanyia province .The bilateral samples were obtained from inner surface of pinna ,auditory canal, infra orbital fossae ,inguinal and perineal region by cotton swab coated with glycerol .The sample were sent immediately to the laboratory of clinical pathology in College of Veterinary/University of Al-Qadissya in screw – cap tubes, then the debris placed on a clean slide and mixed with 1-2 drops of 10% KOH and heated gently &then examined microscopically under low power lens.The parasite were identified according to description of (Ershov ,1959),which includes measurment and morphology of parasite.

Results

The *psoroptes ovis* is observed in 36 samples out of 175 sample with an infestation rate 20.57% .The highest infestation rate 28.8% was reported in sheep aged less than 1 years, While in sheep aged 1-2 years the infestation rate was 19.2 % & the lowest infestation rate reported in sheep aged above 2 years which reached 16.4 % . The result of the infestation rate varied according to the infested region which reached 66.6%,22.2%,and 11.1% in external auditory canal ,infraorbital fossae and inguinal fossae , respectively while there is no mites revealed from perinial region (table.1).The *psoroptes ovis* is the only mites which was identified in infested animals .

Table .1 show the distribution of according to age &region of infestation

Age	No.of examined animals	No.of infested animals	Infestation rate (%)	External auditory canal	Orbitral infra fosses	Inguinal fosses	Perinial region
Less than 1 year	45	13	28.8	8(61.5%)	4(30.7%)	1(7.61)	-----
1- 2 year	57	11	19.2	6(54.5%)	3(27%)	2(18.1%)	-----
Above 2 year	73	12	16.4	10(83.3%)	1(803%)	1(8.3%)	-----
Total	175	36	20.57	24(66.6%)	8(22.2%)	4(11.1%)	-----

Discussion

The *psoroptes ovis* was the only observable mites which responsible for true sheep – scab (Radostits *et al* ,1997;Martin and Aiteken ,2002).The active phase of the disease occur in cold weather ,while the latent phase occurs in summer months (Soulsby,1982;Urquhart et .al ,2003).During the latent phase the mite live in the protected areas of body such as external auditory canal ,infraorbital fossae ,inguinal fossae and perineum(Bates,1996 b; Radostits *et al* ,1997). The infestation rate was reported in this study was agreement with the result of Bates,(1996a).The infestation rate was higher in younger sheep which may be due to the development of immunity in adult sheep (Worbes,1995), may be due to the presence of clinical signs in adult sheep such as aural dermatome or excoriation and wound which may be observed and treated by shippers (Urquhart *et. al* ,2003) .The study also revealed that the external auditory canal has a highest infestation rate among other cryptic sites and this may be due to presence of favorable microclimate in this site .

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دراسة حدوث الطور الكامن للجرب السور بتي في الأغنام في منطقة الديوانية

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الخلاصة

أجريت الدراسة الحالية بهدف تحديد نسبة الخمج بالطور الكامن لمرض الجرب السور وبتي في الأغنام السليمة سريريا في مناطق متفرقة من مدينة الديوانية أثناء فصل الصيف.جمعت 175 عينه من بعض المناطق الخبيئة في جسم الأغنام المفحوصة سريريا مثل القناة السمعية الخارجية والحفرة تحت الحجاجية والحفرة الاربية والمنطقة العجانية وأجريت عليها الفحوصات المجهرية.أظهرت نتائج الدراسة بان نسبة الخمج العامة كانت20.57 % وسجلت أعلاها في الأغنام التي تقل أعمارها عن العام الواحد والتي بلغت 28.8% مقارنة مع 19.2% و16.4% في الأغنام التي تراوحت أعمارها بين 1–2 عام وأكثر من عامين على التوالي .من جانب أخر فقد أظهرت الدراسة تفاوتا في نسبة الخمج حسب مناطق الجسم المفحوصة ،إذ بلغت نسبتها 22.2% 66.6 % و11.1% في كل من القناة السمعيةالخارجية و الحفرة تحت الحجاجية والحفرة الاربية على التوالي.ولم تسجل أي إصابة في المنطقة العجانية .كما أشار الفحص ا لمجهري لعينات الدراسة إن الطفيلي *Psoropes ovis* هو الطفيلي الوحيد المشخص في الدراسة .